



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
DALE ROBINS
Component
Starboard Genset
Fluid
CHEVRON URSA SUPER PLUS 40 (3 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0059478	MW0047404	MW0036430
Sample Date		Client Info		16 Apr 2024	31 Jan 2024	11 Jul 2023
Machine Age	hrs	Client Info		10624	9728	8384
Oil Age	hrs	Client Info		768	1280	992
Filter Age	hrs	Client Info		768	1280	992
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	8	23	5
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	<1	<1	2
Lead	ppm	ASTM D5185m	>17	3	▲ 95	<1
Copper	ppm	ASTM D5185m	>70	5	▲ 85	2
Tin	ppm	ASTM D5185m	>15	2	4	1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

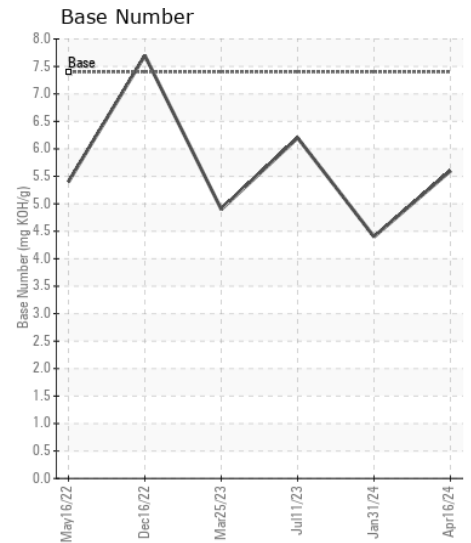
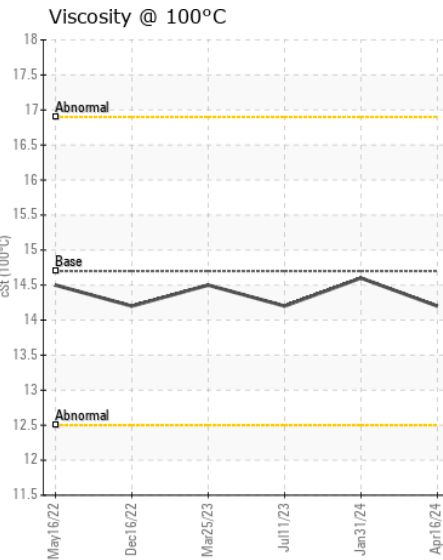
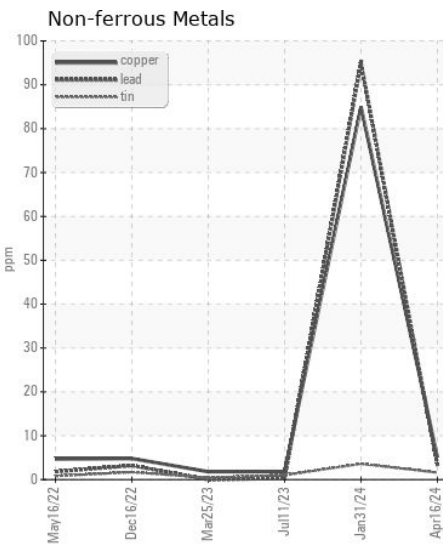
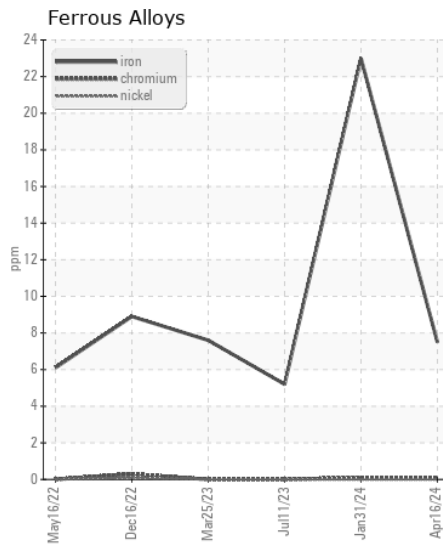
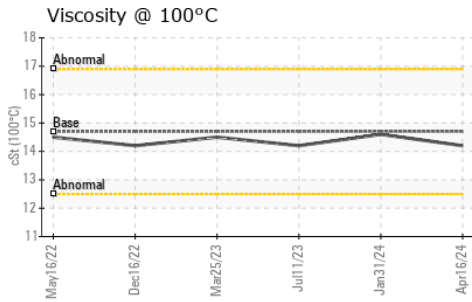
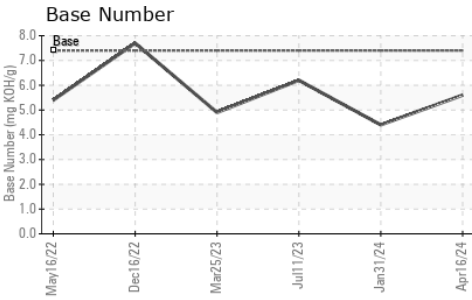
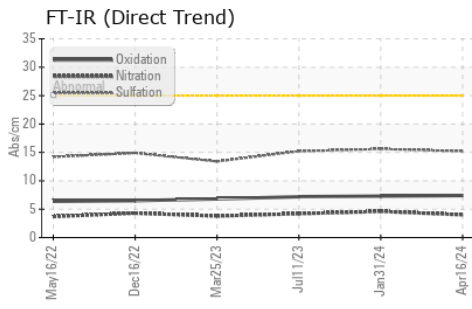
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	6	4
Potassium	ppm	ASTM D5185m	>20	4	▲ 70	0
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	4.0	4.6	4.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.2	15.6	15.2
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		9	▲ 116	2
Boron	ppm	ASTM D5185m		296	159	308
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		32	28	31
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		16	31	32
Calcium	ppm	ASTM D5185m		2579	1969	2535
Phosphorus	ppm	ASTM D5185m	1000	673	621	653
Zinc	ppm	ASTM D5185m	1090	797	741	782
Sulfur	ppm	ASTM D5185m		2915	2225	3152
Oxidation	Abs/.1mm	*ASTM D7414	>25	7.4	7.3	7.2
Base Number (BN)	mg KOH/g	ASTM D2896	7.4	5.6	4.4	6.2
Visc @ 100°C	cSt	ASTM D445	14.7	14.2	14.6	14.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0059478
Lab Number : 06157287
Unique Number : 10992710
Test Package : MAR 2

Received : 23 Apr 2024
Tested : 24 Apr 2024
Diagnosed : 24 Apr 2024 - Wes Davis

OSAGE MARINE
 750 E DAVIS ST
 ST LOUIS, MO
 US 63111

Contact: MIKE KESSLER
 mike.kessler@osagemarine.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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F: